IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application	)		
No. 09/933,912	)	For:	**METHOD AND SYSTEM FOR**
	)		**UTILIZATION OF AN OUTER**
	)		**DECODER IN A BROADCAST**
Tao Chen	)		**SERVICES COMMUNICATION**
	)		**SYSTEM**
Examiner: Nittaya Juntima	)		
	)		
Filed: August 20, 2001	)	Group No.	2616

BRIEF ON APPEAL

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Attention: Board of Patent Appeals and Interferences

Sirs:

This brief is submitted pursuant to 37 C.F.R.§ 41.37 and in the format required by 37

C.F.R. § 41.37(c) and with the fee required by 37 C.F.R. § 41.20(b)(2).

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Date: <u>March 7, 2007</u>

(1)   <u>REAL PARTY IN INTEREST</u>

The real party in interest in the present pending appeal is Qualcomm, Inc., the assignee of the pending application as recorded at Reel 012597 Frame 0687 with the United States Patent and Trademark Office (Patent Office).

(2) <u>RELATED APPEALS AND INTERFERENCES</u>

   Neither Appellant, Appellant's representative, nor Assignee is aware of any pending appeal or interference which would directly affect, be directly affected by, or have any bearing on the Board's decision in the present pending appeal.

(3)   <u>STATUS OF CLAIMS</u>

Claims 25-32 and 57-64 were previously cancelled.

Claims 10-13, 16-24, and 42-56 are allowed.

Claims 10, 20, and 52 were objected to for informalities.

Claims 14 and 15 stand rejected.

Claims 1-9 and 33-41 stand rejected.

The objections of claims 10, 20, and 52 are being appealed.

The rejections of claims 14 and 15 are being appealed.

The rejections of claims 1-9 and 33-41 are being appealed.

(4)   STATUS OF AMENDMENTS

An Amendment under 37 C.F.R. §1.116 was filed on December 8, 2006 wherein arguments and amendments relating to the objections and rejections were proffered.

An Advisory Action in response thereto was mailed on December 28, 2006. The Advisory Action appears defective in that the disposition of the Amendment is not noted in any of boxes 3-7. For purposes of this Appeal, Appellant's arguments assume the Amendment was not entered for any purposes.

A Notice of Appeal was filed on January 11, 2007. Accordingly and in consistent with Appellant's efforts to advance prosecution on the merits, the present Appeal Brief is responsive to all of the objections and rejections of the Final Office Action.

(5)   SUMMARY OF CLAIMED SUBJECT MATTER

With respect to independent claim 1 and referring to FIGs. 1-7, the present invention as claimed is directed to a method for reducing power consumption of a subscriber station. (Specification, paragraphs [1052-1053]; page 16, lines 1-25). The method for reducing power consumption includes determining a number of frames 412 that must be received and decoded correctly by an inner decoder for an outer decoder 416 to correctly decode the received frames 414. (Specification, paragraphs [1047-1049; 1052-1053]; page 13, line 20-page 14, line 15; page 16, lines 1-25). The method for reducing power consumption further includes terminating reception of the frames 414 when the determined number of frames was received correctly. (Specification, paragraphs [1049-1050, 1052-1053]; page 14, line 8-page 15, line 12; page 16, lines 1-25).

With respect to independent claim 33 and referring to FIGs. 1-7, the present invention as claimed is directed to an apparatus for reducing power consumption of a subscriber station. (Specification, paragraph [1052-1053], page 16, lines 1-25). The apparatus includes a processor, a storage medium communicatively coupled to the processor and comprising a set of instructions executable by the processor. (Specification, paragraph 1077; page 26, line 23-page 27, line 3). The instructions are to determine a number of frames 412 that must be received and decoded correctly by an inner decoder for an outer decoder 416 to correctly decode the received frames 414. (Specification, paragraphs [1047-1049; 1052-1053]; page 13, line 20-page 14, line 15; page 16, lines 1-25). The instructions are further to cause termination of reception of the frames when the determined number of frames was received correctly. (Specification, paragraphs [1049-1050, 1052-1053]; page 14, line 8-page 15, line 12; page 16, lines 1-25).

(6)   GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

(1) Whether claims 10, 20, and 52 are properly objected to based upon informalities.

(2) Whether claims 14-15 are unpatentable under 35 U.S.C. 112, second paragraph, as being indefinite.

(3) Whether claims 1-2, 4-7, 9, 33-34, 36-39, and 41 are unpatentable under 35 U.S.C. § 103(a) over U.S. Patent No. 6,012,159 (hereinafter "the Fisher reference").

(4) Whether claims 3, 8, 35, and 40 are unpatentable under 35 U.S.C. § 103(a) over the Fisher reference in view of U.S. Patent No. 5,537,410 (hereinafter "the Li reference").

(7)   ARGUMENT

A.   Authorities Relied Upon

(1) 35 U.S.C. §112, Second Paragraph

The second paragraph of 35 U.S.C. 112 requires that each claim shall particularly point

out and distinctly claim the subject matter that the appellant regards as the invention.

(2) 35 U.S.C. §103

To establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a), three

basic criteria must be met. First, there must be some suggestion or motivation, either in

the references themselves or in the knowledge generally available to one of ordinary skill

in the art, to modify the reference or to combine reference teachings. Second, there must

be a reasonable expectation of success. Third, the cited prior art reference must teach or

suggest all of the claim limitations. Furthermore, the suggestion to make the claimed

combination and the reasonable expectation of success must both be found in the prior

art, and not based on Appellant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d

1438 (Fed. Cir. 1991).

It is improper to combine references where the references teach away from their

combination. MPEP § 2145 (citing *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769,

779 (Fed. Cir. 1983)).

A prior art reference must be considered in its entirety, i.e., as a whole, including

portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc.*

v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert.denied*, 469 U.S. 851 (1984).

The Federal Circuit has repeatedly cautioned against employing hindsight by using the appellant's disclosure as a blueprint to reconstruct the claimed invention out of isolated teaching of the prior art. *See, e.g., Grain Processing Corp. v. American-Maize Prods. Co.*, 840 F.2d 902, 907, 5 U.S.P.Q.2d 1788, 1792 (Fed. Cir. 1988).

The nonobviousness of an independent claim precludes a rejection of a claim which depends therefrom because a dependent claim is obvious only if the independent claim from which it depends is obvious. *See* <u>In re Fine</u>, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988), *see also* MPEP § 2143.03.

B.   <u>Summary of Cited Prior Art</u>

The Fisher reference teaches or suggests transmitting a codefile Y to a subscriber computer using packet-based broadcast protocols. (Fisher, col. 7, lines 27-28). The codefile Y has n-k additional packets than the original file X and therefore requires more bandwidth for transmission. (Fisher, col. 7, lines 28-30). The additional packets and the original quantity of packets are transmitted and the receivers receive as many packets as possible. (Fisher, col. 7, lines 31-33). The receiver corrects as many packets as possible and then, after receiving as many packets as possible, compares the quantity of correct packets with the quantity of original packets to determine if the original file X can be recovered. (Fisher, col. 7, lines 49-52).

The Li reference teaches or suggests a subsequent frame variable data rate indication method. (Li, Title of the Invention) In the method of the Li reference, a fixed frame boundary system with variable data rates inserts into a current frame an indication of the data rate of the next frame. After the first frame is received and processed at a receiver, the data rates of subsequent frames are known before processing. (Li, Abstract).

C.   Arguments for Patentability of Claims 10, 20, and 52

(1)   *Claims 10, 20, and 52 are patentable because the objected-to formalities are, in fact, proper.*

In the Final Office Action, claims 10, 20, and 52 were objected to because of the following informalities:

-in claim 10, line 9, "were" should be changed to "was;"

-in claim 20, line 8, "were" should be changed to "was;"

-in claim 52, line 8, "were" should be changed to "was;"

The Examiner requested that "were" be changed to "was" in the phrase "terminating reception of the frames when said determined number of frames were received correctly" as found in claims 10, 20, and 52. Appellant respectfully submits that this change is grammatically incorrect and should not be made and requests that the objection to claims 10, 20, and 52 be withdrawn. In addition, Appellant also notes that each of these claims, as presented, was indicated as allowed by the Examiner.

D.   Arguments for Patentability of Claims 14 and 15

(1)   *Claims 14 and 15 are patentable because they depend from an allowed base claim.*

In the Final Office Action, dependent claims 14 and 15 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Appellant respectfully points out to the Examiner that claim 14 depends from allowed claim 10. Therefore, Appellant has not rewritten claim 14 as it depends from an allowed base claim. Claim 15 is allowable as depending from allowable claim 14.

Accordingly, Appellant respectfully requests the objections be withdrawn.

E.   Arguments for Patentability of Claims 1-9 and 33-41

(1)   *Claims 1-2, 4-7, 9, 33-34, 36-39, and 41 are patentable because the cited reference does not teach or suggest all of the claim limitations.*

Claims 1-2, 4-7, 9, 33-34, 36-39, and 41 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the Fisher reference. Appellant respectfully traverses this rejection, as hereinafter set forth.

To establish a prima facie case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. "The teaching or suggestion to make the claimed combination and the reasonable expectation of success

must both be found in the prior art, not in Applicants' disclosure." In re Vaeck, 947 F.2d

488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Appellant respectfully submits that a prima facie case of obviousness has not been

established regarding claims 1-2, 4-7, 9, 33-34, 36-39, and 41 because the prior art cited

does not teach or suggest all the claim limitations. Specifically, the cited prior art does

not disclose or suggest the limitations "determining a number of frames that must be

received and decoded correctly by an inner decoder for an outer decoder to correctly

decode the received frames" and "terminating reception of the frames when said

determined number of frames was received correctly" as recited in Appellant's invention

as presently claimed.

The Final Office Action alleges:

Fisher teaches a method comprising:
Determining a number of frames (the number of original packets) ***that must be
received*** and decoded correctly by an inner decoder (decoder that performs EDAC
decoding in step S6) for an outer decoder (decoder that performs decoding in step
S9B) ***to correctly decode the received frames*** (the subscriber determines that the
number of Y' packets correctly received and decoded by EDAC decoding is equal
to the number of original packets, the packets received are forwarded to a second
decoder in order to recover the original file X, col. 7, lines 27-36, 49-52, and col.
8, lines 7-18, see also col. 9, lines 64-col. 10, lines 1, 13-35). (Final Office
Action, pp. 3-4; emphasis added).

Appellant respectfully disagrees with the characterization of the alleged teachings

in the Fisher reference. The Fisher reference, at the Examiner's own citation, accurately

recites:

In step S4, the codefile Y is transmitted to the subscriber computer using
packet-based broadcast protocols. ***Codefile Y has n-k additional packets than
the original file X*** and thus requires more bandwidth than the original file.

In step S5, any one of *the subscriber computers receives a sequence of packets Y'ᵢ, i=1, 2, ..., n,* which are the packets of codefile Y corrupted by the noise channel. (Fisher, col. 7, lines 27-33; emphasis added).

If the number of Y' packets correctly received are greater than or equal to the number of original packets, then the original file X can be recovered in steps S8a, S8b, S9a and S9b. (Fisher, col 7, lines 49-52; emphasis added).

While the Final Office Action alleges that the Fisher reference teaches "Determining a number of frames ... that must be received ... to correctly decode the received frames", the Fisher reference clearly only teaches or suggests transmitting extra "frames", receiving as many frames as is possible to receive and then comparing the quantity of received frames to determine if "the number of Y' packets correctly received are greater than or equal to the number of original packets".

Furthermore, Appellant's invention as presently claimed also recites, in part, "*terminating reception of the frames* when said determined number of frames was received correctly". The Fisher reference clearly does not "terminate reception of the frames" as claimed by Appellant but instead receives all of the receivable frames and then determines if "the number of Y' packets correctly received are greater than or equal to the number of original packets". Therefore, since the Fisher reference teaches or suggests **comparing the quantity of received packets only after all of the packets that can be received have in fact been received,** the Fisher reference cannot render obvious under 35 U.S.C. §103 Appellant's invention as presently claimed. Accordingly, Appellant respectfully requests the rejections be withdrawn.

In addition to the Fisher reference's lack of teaching or suggestion of "*terminating reception of the frames*", the Fisher reference teaches away from such a

claim element. Specifically, the Fisher reference teaches or suggests **comparing the quantity of received packets only after all of the packets that can be received have in fact been received.** Again, the Fisher reference specifically recites receiving all of the packets possible and then after receiving all packets that are possible, comparing to determine "*If the number of Y' packets correctly received* are greater than or equal to the number of original packets". (Fisher, col. 7, lines 49-50). Therefore, since the Fisher reference not only does not teach or suggest Appellant's claim element of "*terminating reception of the frames*", but also teaches away from such a claim element, the Fisher reference cannot render obvious under 35 U.S.C. §103 Appellant's invention as presently claimed. Accordingly, Appellant respectfully requests the rejections be withdrawn.

Claims 2 and 34 are allowable as depending directly from an allowable base claim.

Claims 4, 7, 36, and 39 are allowable as depending directly or indirectly from an allowable base claim.

Claims 5 and 37 are allowable as depending directly or indirectly from an allowable base claim.

Claims 6 and 38 are allowable as depending directly or indirectly from an allowable base claim.

Claims 9 and 41 are allowable as depending directly or indirectly from and allowable base claim.

Claim 33 is allowable for the same reasons given above for claim 1.

(2)   *Claims 3, 8, 35, and 40 are patentable because the cited references do not teach or suggest all of the claim limitations.*

Claims 3, 8, 35, and 40 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the Fisher reference in view of the Li reference. Appellant respectfully traverses this rejection, as hereinafter set forth.

To establish a prima facie case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. "The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicants' disclosure." In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Appellant respectfully submits that a prima facie case of obviousness has not been established regarding claims 3, 8, 35, and 40 because the prior art cited does not teach or suggest all the claim limitations. Specifically, the cited prior art does not disclose or suggest the limitations "*determining a number of frames* that must be received and decoded correctly by an inner decoder for an outer decoder to correctly decode the received frames" and "*terminating reception of the frames* when said determined number of frames was received correctly" as found in Appellant's invention as presently claimed.

The discussion of the Fisher reference, above, also applies to claims 3, 8, 35, and 40. The Li reference teaches or suggests a subsequent frame variable data rate indication method. (Li, Title of the Invention) In the method of the Li reference, a fixed frame boundary system with variable data rates inserts into a current frame an indication of the

data rate of the next frame. After the first frame is received and processed at a receiver, the data rates of subsequent frames are known before processing. (Li, Abstract).

The Li reference does not teach or suggest "***determining a number of frames*** that must be received and decoded correctly by an inner decoder for an outer decoder to correctly decode the received frames" and "***terminating reception of the frames*** when said determined number of frames was received correctly" as found in claim 1. The Examiner cites the Li reference as teaching "informing the receiving end of the data rate (thereby includes the encoding rate and the amount of redundancy)". However, the Li reference is silent regarding the encoding rate. Appellant submits that a data rate is independent of the encoding rate. Data rate refers to the rate of transmission of data packets, while encoding rate may have no relation to the eventual transmission rate. Furthermore, the data rate is independent of the rate of redundancy. The data rate of frame transmission is independent of the number of redundant frames that may be required for successful decoding of the transmitted data. The Li reference is also silent regarding the use of an inner decoder and an outer decoder. Therefore, Appellant submits that the combination of the Fisher reference and the Li reference does not teach or suggest "***determining a number of frames*** that must be received and decoded correctly by an inner decoder for an outer decoder to correctly decode the received frames" and "***terminating reception of the frames*** when said determined number of frames was received correctly" as claimed by Appellant.

Appellant respectfully submits that claims 3, 8, 35, and 40 are allowable as depending directly or indirectly from an allowable base claim as well as for the reasons given above.

(8)   <u>CLAIMS APPENDIX</u>

A copy of claims 1-24 and 33-56 are appended hereto as Appendix A.

(9)   <u>EVIDENCE APPENDIX</u>

        NONE

(10)   RELATED PROCEEDINGS APPENDIX

NONE

<u>CONCLUSION</u>

Appellant respectfully acknowledges the allowance of claims 10-13, 16-24, and 42-56.

Appellant respectfully requests the reversal of the objections and rejections of currently pending

claims 1-9 and 33-38 for the reasons set forth above.

Respectfully submitted,

Dated: <u>March 7, 2007</u>   By: <u>/Roberta Young/</u>

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APPENDIX A

Claims Appendix

U.S. Patent Application No. 09/933,912

Filed August, 20, 2001

1.   (Previously Presented)   A method for reducing power consumption of a subscriber station, comprising:

determining a number of frames that must be received and decoded correctly by an inner decoder for an outer decoder to correctly decode the received frames; and

terminating reception of the frames when said determined number of frames was received correctly.

2.   (Original)   The method as claimed in claim 1 wherein said determining a number of frames that must be received correctly comprises:

determining an amount of redundancy; and

determining the number of frames that must be received correctly in accordance with said determined amount of redundancy.

3.   (Original)   The method as claimed in claim 2 wherein said determining an amount of redundancy comprises:

providing the amount of redundancy independently of the received frames.

4.   (Original)   The method as claimed in claim 2 wherein said determining an amount of redundancy comprises:

determining an encoding rate of received frames; and

determining the amount of redundancy in accordance with the encoding rate.

5.   (Original) The method as claimed in claim 2 wherein said determining the number of frames that must be received correctly in accordance with said determined amount of redundancy comprises:

determining a minimum number of frames that must be received correctly.

6.   (Original) The method as claimed in claim 5, further comprising:

increasing said determined minimum number of frames that must be received correctly by a first number.

7.   (Original) The method as claimed in claim 4 wherein said determining an encoding rate of received frames comprises:

determining an encoding rate of received frames in accordance with the received frames.

8.   (Original) The method as claimed in claim 4 wherein said determining an encoding rate of received frames comprises:

providing an encoding rate of received frames independently of the received frames.

9.   (Original) The method as claimed in claim 1 wherein said terminating reception of the frames when said determined number of frames was received correctly comprises:

terminating reception of the frames when said determined number of frames was received correctly and a time during which the subscriber station is obligated to receive the frames expired.

10.   (Original)   A method for performing hard handoff on a common broadcast channel comprising:

receiving at a subscriber station frames transmitted on the common broadcast channel from a first sector;

determining at the subscriber station a need for handoff;

identifying at the subscriber station at least one sector belonging to a soft handoff group different from a soft handoff group including the first sector;

determining a number of frames from a current buffer that must be received correctly;

terminating reception of the frames when said determined number of frames were received correctly; and

beginning reception of frames from the identified at least one sector.

11.   (Original)   The method as claimed in claim 10 wherein said determining a number of frames that must be received correctly comprises:

determining an amount of redundancy; and

determine number of frames that must be received correctly in accordance with said determined amount of redundancy.

12.   (Original)   The method as claimed in claim 11 wherein said determining an amount of redundancy comprises:

providing the amount of redundancy independently of the received frames.

13.   (Original)   The method as claimed in claim 11 wherein said determining an amount of redundancy comprises:

determining an encoding rate of received frames; and

determining the amount of redundancy in accordance with the encoding rate.

14. (Currently amended) The method as claimed in claim 10 wherein said determining number of frames that must be received correctly in accordance with [[said]] a determined amount of redundancy comprises:

determining a minimum number of frames that must be received correctly.

15. (Original) The method as claimed in claim 14, further comprising:

increasing said determining minimum number of frames that must be received correctly by a first number.

16. (Original) The method as claimed in claim 13 wherein said determining an encoding rate of received frames comprises:

determining an encoding rate of received frames in accordance with the received frames.

17. (Original) The method as claimed in claim 13 wherein said determining an encoding rate of received frames comprises:

providing an encoding rate of received frames independently of the received frames.

18. (Original) The method as claimed in claim 10 wherein said terminating reception of the frames when said determined number of frames were received correctly comprises:

terminating reception of the frames when said determined number of frames were received correctly and a time during which the subscriber station is obligated to receive the frames expired.

19. (Original) The method as claimed in claim 10, further comprising:

determining whether at least some decoded packets received from the at least one sector are identical to at least some decoded packets received from the first sector; and

discarding the identical packets.

20.   (Original)   A method for a handoff from an area covered by an origination system into an area covered by a destination system comprising:

receiving at a subscriber station service on a channel from a sector in the origination system;

determining at the subscriber station a need for handoff;

identifying at the subscriber station a destination system;

determining a number of frames from a current buffer that must be received correctly;

terminating reception of the frames when said determined number of frames were received correctly;

tuning to a frequency of the destination system; and

receiving service on a channel from at least one sector if the at least one sector of the destination system is acquired at the subscriber station.

21.   (Original)   The method as claimed in claim 20, further comprising:

determining a time to restart receiving at a subscriber station service on the channel from the sector in the origination system.

22.   (Previously Presented) The method as claimed in claim 20, further comprising:

storing signals received at the frequency of the destination system;

retuning to the frequency of the origination system;

at the subscriber station concurrently:

receiving service on the channel from the sector in the origination system; and

analyzing the stored signals to identify a sector in a destination system that can provide service;

if no sector of the destination system is acquired at the subscriber station.

23. (Previously Presented) The method as claimed in claim 22 wherein said retuning to the origination frequency of the origination_system comprises:

retuning to the origination frequency before the time to restart receiving service on a channel from a sector in the origination system.

24. (Original) The method as claimed in claim 22, further comprising:

performing hard handoff if the sector in a destination system is identified.

25 – 32 (Cancelled)

33. (Previously Presented) An apparatus for reducing power consumption of a subscriber station, comprising:

a processor; and

a storage medium communicatively coupled to said processor and comprising a set of instructions executable by said processor to:

determine a number of frames that must be received and decoded correctly by an inner decoder for an outer decoder to correctly decode the received frames; and

cause termination of reception of the frames when said determined number of frames was received correctly.

34. (Previously presented) The apparatus as claimed in claim 33 wherein said processor is configured to determine a number of frames that must be received correctly by executing a set of instructions to:

determine an amount of redundancy; and

determine the number of frames that must be received correctly in accordance with said determined amount of redundancy.

35. (Previously presented) The apparatus as claimed in claim 34 wherein said processor is configured to determine an amount of redundancy by executing a set of instructions to:

determine the amount of redundancy independently of the received frames.

36.   (Previously presented) The apparatus as claimed in claim 34 wherein said processor is configured to determine an amount of redundancy by executing a set of instructions to:

determine an encoding rate of received frames; and

determine the amount of redundancy in accordance with the encoding rate.

37.   (Previously presented) The apparatus as claimed in claim 34 wherein said processor is configured to determine the number of frames that must be received correctly in accordance with said determined amount of redundancy by executing a set of instructions to:

determine a minimum number of frames that must be received correctly.

38.   (Previously presented) The apparatus as claimed in claim 37 wherein said processor is further configured to execute a set of instructions to:

increase said determined minimum number of frames that must be received correctly by a first number.

39.   (Previously presented) The apparatus as claimed in claim 36 wherein said processor is configured to determine an encoding rate of received frames by executing a set of instructions to:

determine an encoding rate of received frames in accordance with the received frames.

40.   (Previously presented) The apparatus as claimed in claim 36 wherein said processor is configured to determine an encoding rate of received frames by executing a set of instructions to:

determine an encoding rate of received frames independently of the received frames.

41.   (Previously presented) The apparatus as claimed in claim 33 wherein said processor is configured to cause termination of reception of the frames when said determined number of frames was received correctly by executing a set of instructions to:

cause termination of reception of the frames when said determined number of frames was received correctly and a time during which the subscriber station is obligated to receive the frames expired.

42. (Previously presented) An apparatus for performing hard handoff on a common broadcast channel comprising:

a processor; and

a storage medium communicatively coupled to said processor and comprising a set of instructions executable by said processor to:

cause a subscriber station to receive frames transmitted on a common broadcast channel from a first sector;

determine a need for handoff;

I dentify at least one sector belonging to a soft handoff group different from a soft handoff group including the first sector;

determine a number of frames from a current buffer that must be received correctly;

cause the subscriber station to terminate reception of the frames when said determined number of frames was received correctly; and

cause the subscriber station to begin reception of frames from the identified at least one sector.

43. (Previously presented) The apparatus as claimed in claim 42 wherein said processor is configured to determine a number of frames that must be received correctly by executing a set of instructions to:

determine an amount of redundancy; and

determine the number of frames that must be received correctly in accordance with said determined amount of redundancy.

44. (Previously presented) The apparatus as claimed in claim 43 wherein said processor is configured to determine an amount of redundancy by executing a set of instructions to:

determine the amount of redundancy independently of the received frames.

45.   (Previously presented) The apparatus as claimed in claim 43 wherein said processor is configured to determine an amount of redundancy by executing a set of instructions to:

       determine an encoding rate of received frames; and

       determine the amount of redundancy in accordance with the encoding rate.

46.   (Previously presented) The apparatus as claimed in claim 43 wherein said processor is configured to determine the number of frames that must be received correctly in accordance with said determined amount of redundancy by executing a set of instructions to:

determine a minimum number of frames that must be received correctly.

47.   (Previously presented) The apparatus as claimed in claim 46 wherein said processor is further configured to execute a set of instructions to:

       increase said determined minimum number of frames that must be received correctly by a first number.

48.   (Previously presented) The apparatus as claimed in claim 45 wherein said processor is configured to determine an encoding rate of received frames by executing a set of instructions to:

       determine an encoding rate of received frames in accordance with the received frames.

49.   (Previously presented) The apparatus as claimed in claim 45 wherein said processor is configured to determine an encoding rate of received frames by executing a set of instructions to:

       determine an encoding rate of received frames independently of the received frames.

50.   (Previously presented) The apparatus as claimed in claim 42 wherein said processor is configured to cause the subscriber station to terminate reception of the frames when said determined number of frames were received correctly by executing a set of instructions to:

cause the subscriber station to terminate reception of the frames when said determined number of frames were received correctly and a time during which the subscriber station is obligated to receive the frames expired.

51.   (Previously presented) The apparatus as claimed in claim 42 wherein said processor is further configured to execute a set of instructions to:

determine whether at least some decoded packets received from the at least one sector are identical to at least some decoded packets received from the first sector; and

discard the identical packets.

52.   (Previously presented) An apparatus for a handoff from an area covered by an origination system into an area covered by a destination system comprising:

a processor; and

a storage medium communicatively coupled to said processor and comprising a set of instructions executable by said processor to:

cause a subscriber station to receive service on a channel from a sector in the origination system;

determine a need for handoff;

identify a destination system;

determine a number of frames from a current buffer that must be received correctly;

the subscriber station to terminate reception of the frames when said determined number of frames were received correctly;

cause the subscriber station to tune to a frequency of the destination system; and

cause the subscriber station to receive service on a channel from at least one sector if the at least one sector of the destination system is acquired at the subscriber station.

53.   (Previously presented) The apparatus as claimed in claim 52 wherein said processor is further configured to execute a set of instructions to:

determine a time to cause the subscriber station to restart receiving service on the channel from the sector in the origination system.

54.   (Previously presented) The apparatus as claimed in claim 52 wherein said processor is further configured to execute a set of instructions to:

store signals received at the frequency of the destination system;

cause the subscriber station to retune to a frequency of the origination system and receive service on the channel from the sector in the origination system; and

analyze the stored signals to identify a sector in a destination system that can provide service; if no sector of the destination system is acquired at the subscriber station.

55.   (Previously presented) The apparatus as claimed in claim 54 wherein said processor is configured to cause the subscriber station to retune to a frequency of the origination system and receive service on the channel from the sector in the origination system by executing a set of instructions to:

cause the subscriber station to retune to the frequency of the origination system before the time to restart receiving service on a channel from a sector in the origination system.

56.   (Previously presented) The apparatus as claimed in claim 54 wherein said processor is further configured to execute a set of instructions to:

cause the subscriber station to perform hard handoff if the sector in a destination system is identified.

57 – 64 (Cancelled)